

IN THE UNITED STATES PATENT & TRADEMARK OFFICE

In re Application of:

Sherman, et al.

Serial No.: Unassigned

Art Unit: Unassigned

Filed: March 23, 2004

For: Modular CPR Assist Device

Examiner: Unassigned

REQUEST FOR RECONSIDERATION OF REJECTIONS OF CLAIMS PRESENTED IN
APPLICATION NO. 09/345,635

Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

Sir:

This paper is responsive to the Office Action dated August 14, 2001 in parent application 09/345,635.

Remarks

Claims 1 through 17 remain pending in the application.
Claims 1 through 3 correspond to claims 1 through 3 in parent

Certificate of Mailing (37 CFR 1.10)

I hereby certify that this response (along with any paper referred to as being attached or enclosed) is being deposited in Express Mail using Express Mail Post Office to Addressee with the United States Postal Service on the date shown below in an envelop addressed to Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450

Express Mail No. EL 965835919 US
Date: March 22, 2004

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application 09/345,635.

The Office Action in the parent application rejected claims 1 through 3 under obviousness-type double patenting over Sherman et al., Modular CPR Assist Device, U.S. Patent 6,066,106 (May 23, 2000). Applicants include a terminal disclaimer with this response, thus overcoming the rejection.

The Office Action in the parent application rejected claims 1 and 2 as indefinite under the assertion that:

It is not clear what would comprehend a controller operated to tighten the belt to 'a set threshold of tightness'. What would comprehend this threshold? This would appear to be dependent on unknown parameters.

The term threshold and the use of thresholds in the context of the claimed device are clearly described throughout the specification. The "threshold of tightness" is the point where the belt has reached a pre-determined tightness around the patient. The motor and the brake, directed by the controller, stop the belt at the threshold of tightness. Thus, the claimed term "threshold of tightness" is definite.

Further regarding the indefiniteness rejections of claims 1 and 2, the Applicants have submitted additional claims setting forth particular methods for determining the threshold. These claims demonstrate that threshold is not dependent on unknown parameters, but instead is based on parameters that can be determined prior to manufacture or immediately prior to use. The specification discloses that the threshold of tightness can be established by reference to the maximum force to be applied to the patient, and this may be implemented by imposing torque limits on the belt tensioning means, belt take up limitations (which can be modified in view of the size of the patient, which in turn can be automatically determined by reference to the belt length and the

take-up to the no-slack condition). Thus the system can compress the belt to a predetermined threshold of tightness, whether that threshold is determined in reference to motor torque, induced change of thoracic circumference, or any other parameter. This threshold may be predetermined by the manufacturer, or predetermined by the device, as described in the specification. Thus, the specification provides ample disclosure to apprise those in the art of the parameters upon which the threshold is dependent.

The Office Action in the parent application rejected claims 1 through 3 as obvious over Lach et al., Resuscitation Method and Apparatus, U.S. Patent 4,770,164 (Sep. 13, 1988) under the assertion that Lach teaches the rhythmic operation of tightening and loosening the belt around the patient; that Lach teaches a controller for controlling the operation of the motor and a brake; and that "any differences between Lach and the claimed invention such as what is comprehended by 'a brake' would have been an obvious detail well known to the artisan of ordinary skill."

The Office Action failed to state *prima facie* obviousness rejections because the Office Action provided no motivation to modify Lach. The Office Action stated, without foundation, that "'a brake' would have been an obvious detail well known to the artisan of ordinary skill." Nothing in this statement could be construed to constitute a motivation to modify Lach. The individual opinion of the Examiner that a claimed element would have been an obvious detail is irrelevant to the mandated test for patentability. Because the Office Action failed to state a motivation to modify Lach, the Office Action failed to state *prima facie* obviousness rejections.

The proposed modification does not result in the claims presented in this application because Lach does not show a brake. A brake is capable of limiting the motion of a belt tensioning means (claim 1) or a drive spool (claims 2 and 3) at any point

along the rotation of the belt tensioning means, even if the belt tensioning means or drive spool does not reach a point where it must physically stop. On the other hand, Lach uses a barrier, what he terms a stop, to prevent the belt from exceeding a set maximum or minimum belt tension. Lach provides that:

With the boss 130 against the striker post 132, the knurled knob 128 is turned clockwise to lock the brake. The *mechanical stop* so adjusted will now enforce the tautness limit each time the band is tautened."

Lach, column 8, lines 44 through 48 (emphasis added). Lach also discloses that the electric motor can only stop "in the desired maximum-tautness or maximum-looseness position." See column 11, line 67 through column 12, line 2.

Although Lach uses the term "brake," his use of the term clearly describes a mechanical stop and not a "brake" in the usual sense of the term. A brake would be capable of stopping the claimed belt tensioning means at any point during tensioning or would be capable of stopping the claimed drive spool at any point during rotation. No part of Lach's device is capable of performing these operations. Thus, Lach does not show a brake.

In addition, the term brake is not used in a vacuum. It did not appear necessary to define such a rudimentary term in the specification, as its meaning cannot be argued even if someone in the art misused it in the past. The term clearly means "A mechanism for retarding or stopping motion by friction, as of a carriage or railway car, by the pressure of rubbers against the wheels, or of clogs or ratchets against the track or roadway, or of a pivoted lever against a wheel or drum in a machine" (Webster's Revised Unabridged Dictionary 1996) and clear electro-magnetic analogs. The term brake, as used in the specification and as commonly understood in any mechanical art by artisans of the least degree of skill, connotes a device which may be employed

to stop and hold a moving part at any part in its movement, such as for example, stopping the rotation of a shaft at any point in its rotation. The most obvious example of a brake is the automotive brake, which obviously can be engaged at any point in the rotation of the tires, and can obviously hold the tires in a fixed position. The sloppiness and error of Lach, in using the term "brake" in reference to a mechanism that was merely a stop, should not preclude the Applicant from using the terminology that most clearly communicates the inventive concepts disclosed in the specification. The art cannot be forever precluded from proper English communications due to the error of a single application. The claims using the term "brake" as in the parent application recite structure sufficiently distinct from Lach to avoid any confusion with the concepts disclosed by Lach, and there is clearly no motivation in Lach to modify the device to achieve the functionality of Applicant's device. The functionality recited in the claims ("capable of holding the belt tensioning means in a tightened state") requires that the brake be operable to hold the belt tightening means. This functionality is clearly not provided by Lach's stop. This functionality in the brake is combined with the controller functionality to operate the brake to hold the belt tightening means at a tightness threshold. The combination is utterly impossible with Lach's device, and neither Lach nor the art express any reason or motivation to provide this functionality. The claims should be allowed.

Notwithstanding the clear patentability of the original claims, the Applicants have submitted additional claims adopting language more clearly defining the brake with functional language. The functionality indicated in claims 4 through 9 is demonstrated throughout the specification, and further distinguish the claimed device from Lach.

In addition, there is no basis to assert that the addition of a brake is an obvious detail. No one has proposed an automated

CPR device having a belt, a motor and a brake as claimed. Thus, the Examiner must provide some support for asserting that the provision of a brake in the claimed device would be an obvious detail. To Applicants' knowledge, no such basis exists. Thus, the claims are non-obvious.

In addition, the previous Office Action failed to state prima facie obviousness rejections because, contrary to the Office Action assertion otherwise, Lach does not suggest a controller programmed to adjust the belt to a set threshold of tightness as claimed. In claims 1 and 2, the controller sets a threshold of tightness of the belt, momentarily holds the belt at this threshold of tightness, and releases the belt. Lach does not disclose a controller adapted to perform this function. Thus, the previous Office Action failed to state prima facie obviousness rejections of claims 1 and 2.

In claim 3, the controller operates the motor and the brake to rotate the drive spool "to cause repeated cycles of tightening of the belt and prevent the drive spool from rotating at selected points in the repeated cycle times." Lach does not disclose a controller adapted to perform this function. Thus, the previous Office Action also failed to state a prima facie obviousness rejection of claim 3.

In addition, the proposed modification does not result in the inventions of claims 1 and 2 because Lach does not show a controller programmed to operate the device to tighten the belt to a set threshold of tightness as claimed. The Lach controller does not set belt tightness, the operator does. On the other hand, the devices of claims 1-2 are capable of actively controlling belt tightness to a set a threshold of tightness.

Similarly, the controller of claim 3 is adapted to control the motion of the belt at selected points during the operation of the device. Lach does not disclose or suggest a controller

adapted to perform this functions. Accordingly, the Office Action also failed to state a *prima facie* obviousness rejection of claim 3.

In addition, the device of claims 1 and 2 solve a non-obvious problem presented by Lach's device. Because the operator of Lach's device sets the threshold of tightness, Lach introduces a risk that the operator will set the belt tightness too high or too low by setting the stops incorrectly. If the belt tightness is too high or too low, then the patient could be injured or the compressions could be too weak to effectively compress the chest. Applicants' solved this problem with the claimed devices, which are capable of setting the threshold of tightness appropriate for a particular patient or for all patients, depending on the manufacturer's preference. Because Applicants' claimed devices solves a non-obvious problem presented by Lach's device, claims 1 and 2 are non-obvious.

Conclusion

This response has addressed all of the Examiner's grounds for rejection. The rejections based on prior art have been traversed. Reconsideration of the rejections and allowance of the claims is requested.

Date: March 22, 2004

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